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SITE SUMMARY AND RECOMMENDATIONS

From the mid-1960s to 1974, the Keegan Landfill site was utilized as a municipal sanitary landfill. Keegan/MSLA leased the property from the Town of Kearny. Unauthorized dumping is also reported to have occurred at the site. Wastes deposited on site include cardboard, construction, and household waste; landscaping debris; abandoned tires, appliances, automobiles; and drummed/uncontained plating wastes (chromate and bichromate slurry), pigment wastes, and organic wastes. A release of contaminants is suspected due to the presence of on-site soil contamination; the existence of a shallow water table; the site history of unauthorized dumping; and the close proximity of surface water bodies and their respective sensitive environments.

The Region II START SIP 1997 sampling data documents a release of site contaminants to adjacent surface water sensitive environments. In July 1997, Region II START collected 13 sediment samples, 4 soil samples, and 3 surface water samples from site. Analytical data of the source soil samples indicate the presence of various contaminants, including phthalates, pesticides, and metals, at concentrations three times greater than that of the background sample data. The PCB Aroclor-1260 was detected in soil and sediment samples throughout the site; however, Aroclor-1260 was also detected in the soil and sediment background samples.

Analytical data of sediment samples associated with Frank Creek and its adjacent wetlands indicate the presence of phthalates, pesticides, arsenic, and chromium at concentrations significantly above background. Analytical data of sediment samples collected from the eastern open-water wetland area indicate the presence of phthalates, pesticides, antimony, arsenic, cadmium, chromium, and copper at concentrations significantly above background. The adjacent open-water wetland is interconnected with the Kearny Marsh, a New Jersey Department of Environmental Protection (NJDEP) Natural Heritage Program (NHP) Priority Site and state-listed endangered species habitat. The remainder of the surface water migration route, along which numerous other sensitive environments and considerable wetland frontage are located, is composed of highly industrialized coastal tidal water bodies. Although these surface waters sustain fish populations, state-issued prohibitions and health advisories on the sale and consumption of specific fishes taken from these waters exist. There are no drinking water intakes along the surface water migration route.

Although there is a suspected release of contaminants to groundwater, drinking water supplies within the site vicinity are obtained from sources greater than 4 miles from the site. There are no residences, schools, or day care facilities within 200 feet of the site boundary. As no remedial actions involving removal or containment of on-site wastes have occurred, contaminants associated with the site may continue to migrate to groundwater and adjacent surface water bodies.

Due to actual contamination of adjacent wetland frontage, the surface water pathway score for the site under PREscore is maximized (e.g., value of 100.00), which raises the overall site score to 50.97. Based on the conditions listed above, START recommends **a Higher Priority for Further Action** for the Keegan Landfill site.

PREScore 4.1
HRS DOCUMENTATION RECORD
Keegan Landfill (aka, MSLA Site B) - 12/30/97

1. Site Name: Keegan Landfill (aka, MSLA Site B)
   (as entered in CERCLIS)

2. Site CERCLIS Number: NJD981490428

3. Site Reviewer: K. Campbell

4. Date: 12/09/97

5. Site Location: Kearny, Hudson, NJ
   (City/County,State)

6. Congressional District: 09

7. Site Coordinates: Multiple

   Latitude: 40°45'19.0" Longitude: 074°08'15.0"

	Score
Ground Water Migration Pathway Score (Sgw)	1.07
Surface Water Migration Pathway Score (Ssw)	100.00
Soil Exposure Pathway Score (Ss)	17.36
Air Migration Pathway Score (Sa)	9.53

Site Score	50.97

NOTE

Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

PREScore 4.1
WASTE QUANTITY
Keegan Landfill (aka, MSLA Site B) - 12/30/97

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Landfill

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

PREScore 4.1
WASTE QUANTITY
Keegan Landfill (aka, MSLA Site B) - 12/30/97

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		Landfill	
b. Source Type		Landfill	
c. Secondary Source Type		N.A.	
d. Source Vol.(yd3/gal)	Source Area (ft2)	0.00	10018800.00
e. Source Volume/Area Value		2.95E+03	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		2.95E+03	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Antimony	< 2	NO	2.2E+02	ppm
Arsenic	< 2	NO	6.0E+01	ppm
Butylbenzyl phthalate	< 2	NO	5.3E+00	ppm
Cadmium	< 2	NO	2.2E+01	ppm
Chlordane, alpha-	< 2	NO	1.9E-01	ppm
Chlordane, gamma-	< 2	NO	6.3E-02	ppm
Chromium	< 2	NO	1.2E+02	ppm
Copper	< 2	NO	4.9E+03	ppm
DDD	< 2	NO	4.2E-02	ppm
DDE	< 2	NO	1.8E-01	ppm
DDT	< 2	NO	6.0E-01	ppm
Diethyl phthalate	< 2	NO	1.6E+00	ppm
Endrin	> 2	NO	3.0E-01	ppm
Endrin aldehyde	< 2	NO	9.3E-02	ppm
Mercury	< 2	NO	3.7E+00	ppm
Nickel	< 2	NO	8.2E+01	ppm
Nitrosodiphenylamine, N-	< 2	NO	1.2E+00	ppm
Vanadium	< 2	NO	1.1E+02	ppm

PREScore 4.1
WASTE QUANTITY
Keegan Landfill (aka, MSLA Site B) - 12/30/97

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	Landfill	GW-SW-SE-A	2.95E+03	0.00E+00	2.95E+03

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+04	100	32
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	100	32
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	2.00E+08	100	320
SW: Overland Flow, Env	Etox./Persis./Bioacc.	5.00E+08	100	320
SW: GW to SW, DW	Tox./Persistence	1.00E+04	100	32
SW: GW to SW, HFC	Tox./Persis./Bioacc.	2.00E+08	100	320
SW: GW to SW, Env	Etox./Persis./Bioacc.	2.00E+08	100	320
Soil Exposure:Resident	Toxicity	1.00E+04	100	32
Soil Exposure: Nearby	Toxicity	1.00E+04	100	32
Air	Toxicity/Mobility	2.00E+03	100	18

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

PREScore 4.1
GROUND WATER MIGRATION PATHWAY SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Overburden		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	5
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	130
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Well	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	5.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	5.00E+00
12. Targets (including overlaying aquifers)	**	5.00E+00
13. Aquifer Score	100	1.07
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	1.07

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	550
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	3
2c. Distance to Surface Water	25	25
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	280
3. Potential to Release by Flood		
3a. Containment (Flood)	10	10
3b. Flood Frequency	50	25
3c. Potential to Release by Flood (lines 3a x 3b)	500	250
4. Potential to Release (lines 2d+3c)	500	500
5. Likelihood of Release	550	550
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	100
8. Waste Characteristics	100	32
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	0.00E+00
12. Targets (lines 9+10d+11)	**	0.00E+00
13. DRINKING WATER THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	550
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	2.00E+08
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	1000	320
Targets		
18. Food Chain Individual	50	4.50E+01
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	3.00E-02
19c. Pot. Human Food Chain Contamination	**	9.00E-07
19d. Population (lines 19a+19b+19c)	**	3.00E-02
20. Targets (lines 18+19d)	**	4.50E+01
21. HUMAN FOOD CHAIN THREAT SCORE	100	96.06

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	550
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+08
24. Hazardous Waste Quantity	*	100
25. Waste Characteristics	1000	320
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	1.00E+02
26c. Potential Contamination	**	7.00E-03
26d. Sensitive Environments (lines 26a+26b+26c)	**	1.00E+02
27. Targets (line 26d)	**	1.00E+02
28. ENVIRONMENTAL THREAT SCORE	60	60.00
29. WATERSHED SCORE	100	100.00
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	100.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer Aquifer: Overburden		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	3
2c. Depth to Aquifer	5	5
2d. Travel Time	35	5
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	130
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	1.00E+04
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	32
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	0.00E+00
10. Targets (lines 7+8d+9)	**	0.00E+00
11. DRINKING WATER THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	550
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	2.00E+08
14. Hazardous Waste Quantity	*	100
15. Waste Characteristics	1000	320
Targets		
16. Food Chain Individual	50	4.50E+01
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	3.00E-02
17c. Pot. Human Food Chain Contamination	**	0.00E+00
17d. Population (lines 17a+17b+17c)	**	3.00E-02
18. Targets (lines 16+17d)	**	4.50E+01
19. HUMAN FOOD CHAIN THREAT SCORE	100	96.06

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	550
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc. 22. Hazardous Waste Quantity 23. Waste Characteristics	* * 1000	2.00E+08 100 320
Targets		
24. Sensitive Environments 24a. Level I Concentrations 24b. Level II Concentrations 24c. Potential Contamination 24d. Sensitive Environments (lines 24a+24b+24c) 25. Targets (line 24d)	 ** ** ** ** **	 0.00E+00 1.00E+02 0.00E+00 1.00E+02 1.00E+02
26. ENVIRONMENTAL THREAT SCORE	60	60.00
27. WATERSHED SCORE	100	100.00
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	100.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SOIL EXPOSURE PATHWAY SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	100
4. Waste Characteristics	100	32
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	0.00E+00
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	7.50E+01
10. Targets (lines 5+6c+7+8+9)	**	7.50E+01
11. RESIDENT POPULATION THREAT SCORE	**	1.32E+06

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

PREScore 4.1
SOIL EXPOSURE PATHWAY SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	2.50E+01
13. Area of Contamination	100	1.00E+02
14. Likelihood of Exposure	500	2.50E+02
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	100	32
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	1.30E+01
20. Targets (lines 18+19)	**	1.40E+01
21. NEARBY POPULATION THREAT SCORE	**	1.12E+05
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	17.36

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
AIR PATHWAY SCORESHEET
Keegan Landfill (aka, MSLA Site B) - 12/30/97

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	220
2b. Particulate Potential to Release	500	280
2c. Potential to Release	500	280
3. Likelihood of Release	550	280
Waste Characteristics		
4. Toxicity/Mobility	*	2.00E+03
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	18
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.26E+02
8d. Population (lines 8a+8b+8c)	**	1.26E+02
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	1.00E+01
10c. Sens. Environments(lines 10a+10b)	***	1.00E+01
11. Targets (lines 7+8d+9+10c)	**	1.56E+02
AIR MIGRATION PATHWAY SCORE (Sa)	100	9.53E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.